

REMARKS

By this amendment, the original claims 1-16, along with new claims 17-70, are submitted for consideration in view of the remarks following.

In the Office Action, the Examiner rejected claims 1, 4-8, 10, 11 and 14-16 under 35 USC 102(b) as anticipated by Morio et al. (US Patent No. 4,163,253) and rejected claims 2-3, 9, 12 and 13 under 35 USC 103(a) as being unpatentable over Morio.

With regards to the rejections based on the cited reference to Morio et al. (hereinafter "Morio"), applicant respectfully submits that the cited reference fails to anticipate, or to make obvious, the present invention as disclosed in the specification and set forth in the claims 1-16, as well as in new claims 17-70. To illustrate, in one embodiment, the present invention embodies the concept of applying an extra (additional) negative going presync pulse followed by an extra (additional) positive going pulse prior to the normal H sync signal (that is, in the front porch region) in the HBI of a video signal (underlined here and in arguments below for emphasis). Morio fails to remotely suggest such feature, but instead includes a (positive going) pulse of amplitude P, corresponding to a normal AGC pulse, in the back porch of the input signal (that is, following a normal H sync signal of amplitude h), prior to coupling to the AGC system.

In Morio, the pulse P then causes the recorder's AGC system to add/combine reference signal S_p onto the pulse of amplitude P. This yields a total amplitude of $H + 2P$ (e.g., 1.714 volts) for the AGC system, which is larger than the normal value of $h + P$ (e.g., 1.0 volt). As a result, the AGC system turns down to cause the copy protection effect desired by Morio.

It follows that in Morio, the negative going pulse of amplitude h and the positive going pulse P are normal H sync and AGC pulses, not additional negative and positive going pulses as in the claimed invention. Accordingly, only the positive going pulse (P) is included in the video signal in Morio. In addition, an extra negative going pulse is not added. Further, the positive going pulse is included in the back porch, not the front porch.

More particularly, with regards to the rejection under 35 USC 102(b) and particularly to claims 1 and 11, as well as new claims 17, 27, 33, 34, 38, 44, 49 and 50, Morio fails to disclose or suggest the insertion, in the front porch, that is, prior to the normal H sync, of a negative going pulse followed by a positive going pulse (also prior to the normal H sync). That is, the negative pulse of amplitude h in Morio is the normal H sync not an additional negative going (presync) pulse as in applicant's claimed invention. Ergo, Morio does not suggest a negative going pulse

inserted prior to the normal H sync pulse. In fact, Morio fails to add any additional negative going pulse in either the front porch or back porch region of a video signal.

Morio does suggest combining a positive going pulse (pulse P) with the positive going reference pulse Sp. However, the positive going pulse is added in the back porch region, not in the front porch region as recited in applicant's claims 1, 11, 17, 27, 33, 34, 38, 44, 49 and 50. More importantly, the reference pulse Sp is added/combined to the positive going pulse P by the conventional function of the recorder's AGC system.

The Examiner refers to a passage in Morio in his rejection, viz, Col. 8, line 22 to Col. 9, line 43 and also to Figs. 2A-2G and claim 3. First, the Figs. 2A-2G fail to remotely disclose the addition of an additional negative going pulse and an associated additional positive going pulse in the front porch region, that is, prior to the normal H sync pulse. The pulses shown in Morio's Fig. 2F, for example are a normal H sync with amplitude h and a normal AGC pulse with amplitude P in the back porch region. Fig. 2G depicts a normal H sync with amplitude h and an AGC pulse with amplitude 2P when the signal of Fig. 2F is subjected to the AGC system of the VCR which adds a reference pulse Sp of amplitude P. However, as previously argued the AGC pulse is "added" in the back porch region not the front porch region. Ergo, contrary to the Examiner's conclusion, the positive going pulses of Figs. 2F and 2G are located in the back porch region of the waveform, following Morio's normal H sync signal of amplitude h.

With regards to the passage in Col. 9, lines 6-10, same refers to a front porch modification. This passage explains how an internal reference pulse Sp, can be moved into a front porch region instead of a back porch region for sensing in an AGC amplifier. This passage just explains that an AGC system can sense off the front porch as an alternative. However, the passage does not teach the generation of a copy protection signal by adding both a negative going and a positive going pulse to the video signal to provide for copy protection. The reference pulse Sp is not a copy protection pulse, but is a signal provided as part of the AGC system described in Morio.

Likewise, claim 3 of Morio refers only to positive going pulses but not negative going (presync) pulses added in the front porch region, and thus fails to suggest the features of claims 1 and 11 (and 17, 27, 33, 34, 38, 44, 49, 50) for reasons discussed above.

Regarding claim 4, Morio fails to disclose or suggest inserting an additional portion of color burst of the same phase in the front porch region, the H sync pulse and/or the back porch

region. It is well known to have normal color burst in the back porch region. The present invention in one embodiment adds an extended color burst signal (40 in Fig. 2G) in the back porch region. See the specification, paragraphs 0050 and 0051 on page 14. Contrary to the Examiner's conclusion concerning the passage of Col. 9, lines 18-26, Morio only mentions a normal color burst. For example, Morio states in Col. 9, lines 18-21 that "...the video signal which is to be modified is a color video signal including a burst signal provided on the back porch...". There is no suggestion that the color burst is an additional portion (i.e., an extended) color burst as recited in claim 4. In addition, Morio also fails to suggest inserting an additional portion of color burst of the same phase in the front porch and/or in the H sync interval.

Regarding claim 5, in Col. 8, lines 22-38 and Figs. 2A-2G, Morio discloses the presence of a reference pulse Sp which is added to the modified video signal Sv'. However, the pulse Sp is not added after the normal H sync signal as shown as pulse 51 in the Fig. 3E of the present application. Claim 5 recites such an extra post sync negative going pulse.

Regarding claim 6, in Col. 4, line 64 to Col. 5, line 25, Morio only discloses the separation of normal H sync pulses Ss from the composite video signal. The location of the normal H sync pulses Ss is the conventional location in the HBI. There is no mention or suggestion in Morio of adding an additional negative going pulse to the end of the active video line. Since an additional negative going pulse is not even suggested, by definition such a pulse cannot be applied "at or within the end of the active video line," as recited in claim 6.

Regarding claim 7, as previously discussed, Morio fails to disclose or remotely suggest "additional" negative and/or positive going pulses in addition to the normal H sync and AGC pulses of Figs. 2A-2G of Morio. Claim 7 recites still another additional pulse (Fig. 2G, pulse 42 of the application) over and above applicant's (additional) negative going (presync) and positive going pulses 32, 34 of Figs. 2B, 2C, 2G, 3E. Accordingly, Morio fails to intend the extra additional negative going pulse (42) recited in claim 7.

Regarding claim 8, as repeated above, Morio does not disclose or suggest the adding of additional negative and positive going pulses to normal H sync and/or AGC pulses such as pulse P of Morio. It follows then that Morio cannot possibly disclose or even intend the application of an additional negative going pulse to a portion of the H sync (see pulse 38, Figs. 2G, 3B and 3D of application) and/or to a portion of the pseudo sync pulse (see pulse 50 of Figs. 3C and 3D), as recited in claim 8. The added negative going pulses (38, 50) of the invention are superimposed

on at least a portion of the normal H sync 30 or pseudo sync 46 pulses, respectively. Figs. 2A-2G of Morio fail to even suggest such additional pulses. In fact, Morio does not mention the existence of pseudo sync pulses in his description and figures.

Regarding claim 10, Morio fails to disclose reducing the amplitude of the normal H sync of amplitude *h* prior to the video signal being passed through the AGC amplifier (12 of Morio). In Morio, the gain of the AGC amplifier 12 is lowered to correspondingly reduce the level of the recorded video signal. To the contrary, applicant reduces the amplitude of the H sync in the original video signal itself. Further, since Morio makes no mention of pseudo sync signals he cannot possibly disclose reducing the amplitude of a (non existent) pseudo sync signal.

Regarding claim 14, the passage cited by the Examiner in Morio, Col. 4, lines 3-40, fails to mention the modulation of his positive going pulse P of Figs. 2E, 2F. Morio instead states in Col. 4, lines 26-27 that the amplitude of the pulse P is “substantially equal to the peak white level of the video signal.”

Regarding claim 15, the description in either Col. 4, lines 3-40 or Col. 6, lines 17-38 fails to even imply that the pulse width of the positive going pulse (i.e., pulse P of Figs. 2E, 2F of Morio) is modulated in width. Not one mention is made of modulation of pulses in Morio.

Regarding claim 16, in the cited passage in Col. 4, lines 23-40 of Morio, the value of 30% refers to the ratio between the H sync pulse amplitude relative to the total amplitude level from the tip of the H sync to the maximum video signal level. See Morio, Col. 4, lines 27-32. These amplitudes and percentages are totally irrelevant to applicant's percentage or ratio of positive going pulses (34) which are added to video lines with negative going pulses (32) being 10% to 30%. Ergo, claim 16 is not concerned with amplitude ratios but is instead referring to the percentage range of lines with positive going pulses relative to lines with negative going pulses.

With regards now to the rejection of claims 2, 3, 9, 12 and 13 under 35 USC 103(a), claims 2 and 3 are dependent from claim 1; claim 9 is dependent from claim 8; and claims 12 and 13 are dependent from claim 11. Ergo, since claims 1, 8 and 11 are respectfully submitted in condition for allowance in view of the lack of anticipation by the irrelevant subject matter in Morio as discussed fully above, applicant believes the features of the dependent claims 2, 3, 9, 12 and 13 taken together with the features of the respective independent claims are also in condition for allowance.

In addition, the ranges of values of these dependent claims are generally specific to the extra, that is, additional, pulses not disclosed in Morio. Accordingly, it follows that such values would not be obvious to one of ordinary skill in the art particularly because Morio fails to disclose or suggest the additional negative and positive going pulses of which one of ordinary skill would have to be aware in order to draw conclusions concerning the ranges of values of such additional pulses. Ergo, the claims 2, 3, 9, 12 and 13 recite further characterizations of the features of the independent claims 1, 8 and 11 and are believed in condition for allowance along with the independent claims.

Applicant wishes to draw the attention of the Examiner to recently published US Patent 7,050,698 B1 ('698) issued May 23, 2006 and related US Patent Application Publication US 2006/0056809 A1, of March 16, 2006, only recently discovered as possibly of interest to the prosecution of this present application. The following comments are made with reference to the Patent '698 but are also applicable to the similar subject matter of the publication.

Patent '698 discloses the synthesizing or modifying of a copy protected signal which primarily is concerned with modifying the level of a front or a back porch region and adding an incorrect color signal in the region of the sync pulse or of the back porch so as to cause the incorrect sampling of the color burst signal. In alternative versions, '698 depicts the lowering of the front porch to provide a modified front porch (MFP) 18, 32, 44, 62 and 180. In addition, Fig. 3A of '698 depicts a MFP 32 as well as a positive going pulse 38 in the front porch region.

However, as depicted throughout the figures and the specification of '698, the MFP level cannot be lowered to the level of horizontal sync tip level. See '698, Col. 7, lines 15-19.

More importantly, the system and method of the patent '698 only functions as intended if the partial lowering of the front porch embodiment is applied to a video signal in conjunction with a video signal which already contains an added copy protection signal. That is, a feature of '698 (for example, lowering the front porch) only works on a copy protected video signal. See Col. 1, lines 15-32, etc; Col. 3, lines 9-12; Col. 5, lines 16-22; and all independent claims, etc.

To the contrary, in the present invention, the "additional" negative going presync pulses are added as pulses of "substantially the sync tip level," as is recited in the amended and new claims 1, 8, 11, 17, 27, 33, 34, 38, 44, 49 and 50. Furthermore, the present invention as claimed does not require that the video signal being modified include a form of copy protection in order to function as intended. That is, the signal in the method of '698 is not sensed without the

presence of a basic copy protection signal, such as a sync/AGC copy protection system, which causes the attenuation of the video signal as is required by the method and apparatus of '698.

On the other hand, the present invention as claimed does not require attenuation of the video signal in order for the copy protection signal to be sensed.

New claims 49 and 50 recite method and apparatus, respectively, for modifying a video signal in accordance with two or more of the steps or circuits, respectively, of Fig. 1 of the present invention and are believed in condition for allowance over the cited and newly uncovered prior art, for reasons discussed above.

New claims 24, 35, 37, 51 and 53 variously recite method and apparatus for the addition of another (that is, additional or "extra") negative going pulse in a portion (or a latter portion) of the negative going presync pulse or in a portion (or latter portion) of the pseudo sync pulses. See for example, Figs. 2, 3D, pulse 38, Figs. 3D, E, pulse 50, and pertinent descriptions thereof. Neither Morio nor '698 disclose or suggest the addition of such a negative going pulse added to the H sync or pseudo sync pulse to extend the negative amplitude thereof.

New claims 55, 57, 59 and 65 variously recite method and apparatus for providing a time extended phase shifted color burst signal and/or extending an H sync or pseudo sync pulse amplitude portion of the video signal. Here again, Morio or '698 fail to suggest such features.

The remaining claims are dependent upon the various new independent claims mentioned above and recite further characteristics of the new independent claims. It is respectfully submitted that since the new independent claims are in condition for allowance, the claims dependent thereon also are believed allowable, for reasons given above.

Ergo, it is respectfully submitted that the Morio and US Patent 7,050,698 (and publication US 2006/0056809 A1) fail to anticipate or make obvious the features of the present invention as set forth in the amended and new claims 1-70.

Action in the form of allowance of the claims 1-70 therefore is earnestly solicited.

If there are any questions about this paper or the associated application, please contact the undersigned at the telephone number given below. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

Please charge any required fees due to this amendment to Deposit Account No. 13-0762.

Respectfully submitted,

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